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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,464	02/13/2004	Nestor Tzartzanis	02EK-108868	5558
30764	7590	06/15/2005	EXAMINER	
SHEPPARD, MULLIN, RICHTER & HAMPTON LLP			HOANG, HUAN	
333 SOUTH HOPE STREET			ART UNIT	
48TH FLOOR			PAPER NUMBER	
LOS ANGELES, CA 90071-1448			2827	

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/779,464

Applicant(s)

TZARTZANIS ET AL.

Examiner

Huan Hoang

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 21-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 12, 15 and 38 is/are rejected.
- 7) ☒ Claim(s) 5-11, 13, 14, 16-20, 39 and 40 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>062104</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 21-37 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 05/13/05.
2. Applicant's election without traverse of Group I (claims 1-20 and 38-40) in the reply filed on 05/13/05 is acknowledged.

Claim Objections

3. Claim 3 is objected to because of the following informalities:

The word "cell" in "current reference cell" in claim 3, line 9 and line 11 should be "circuit". Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1-4 and 15 are rejected under 35 U.S.C. 102(a) as being anticipated by

Toda.

Toda discloses a memory device having all the elements as recited in claims 1-4 and 15 as follows:

a first plurality of memory cells (array 1t, Fig. 1), each cell having a read-select input and a read output (Fig. 2) each memory cell generating a current at its read output that is representative of a data value stored by the cell when the read-select input of the memory cell is activated (column 5, lines 45-52), the current being less than or equal to a maximum magnitude $IM1$;

a second plurality of memory cells (array 1c, Fig. 1), each cell having a read-select input and a read output (Fig. 2) each memory cell generating a current at its read output that is representative of a data value stored by the cell when the read-select input of the memory cell is activated (column 5, lines 45-52), the current being less than or equal to a maximum magnitude $IM2$;

a first bit line (TBL, Fig. 1);

a second bit line (CBL, Fig. 1);

a first reference current circuit (MN4, MP1 and 36, Fig. 8) having an enable input (signal from N1 to the gates of MN4 and MP1) and an output, the output being coupled to the second bit line (CBL), the first reference current circuit generating a first reference current $TR1$ having a magnitude that is less than $IM1$ (column 7, lines 64-67);

a second reference current circuit (MN3, MP0 and 36, Fig. 8) having an enable input (signal from N2 to the gates of MN3 and MP0) and an output, the output being coupled to the first bit line, the second reference current circuit generating a second reference current $TR2$ having a magnitude that is less than $IM2$ (column 7, lines 64-67);

a current sense amplifier having a first input coupled to the first bit line, a second input coupled to the second bit line, and an output generating a signal representative of the difference in currents presented at the inputs of the differential current sense amplifier.

The maximum magnitude IM1 or IM2 of the current of a memory cell is inherent.

Regarding claims 2-4, Toda shows "wherein the first reference circuit is activated when any one of the read select inputs of the first plurality of memory cells is activated, and wherein the second reference current circuit is activated when any one of the read-select inputs of the second plurality of memory cell is activated" in Fig. 11, the read control /decoder (9, 4t and 4c, Fig. 1).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 12 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda in view of Harada et al..

Toda discloses all the elements and steps as recited in claims 12 and 38 except for the reference current being equal or less than 0.5 IM1 or IM2. However, the reference current is set to the half of the cell current is well-known in the art to provide a reference current for the current sense amplifier and this is disclosed by Harada et al. in

paragraph [0054]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to set the reference current to the half of the cell current in order to provide a reference current to the current sense amplifier.

Allowable Subject Matter

8. Claims 5-11, 13, 14, 16-10, 39 and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

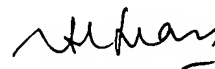
The prior art does not teach or suggest the specific ranges as recited in the above claims.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huan Hoang whose telephone number is (571) 272-1779. The examiner can normally be reached on Mon-Fri 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoai Ho can be reached on (571) 272-1777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2827

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Huan Hoang
Primary Examiner
Art Unit 2827

HH
6/10/05.